DISKARRANGER™

by William Swanson

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Introduction

Welcome to **DISK arRANGER,** a collection of utilities for managing disk files and catalogs. With **DISK arRANGER** you can organize ProDOS directories and DOS 3.3 diskette catalogs with ease. Both versions provide means to rename, move, delete, and easily transfer files to other diskettes one at a time, as well as allowing sorting of the catalog/directory alphabetically or by file type. The ProDOS version allows moving of files between directories or between volumes, is compatible with hard disks, and, due to the compatibility of ProDOS and Apple III SOS format disks, allows organization of SOS diskettes on an Apple II. Additionally, the DOS 3.3 version allows organization of DOS 3.3 disk catalogs in virtually any fashion - file names can be customized using flashing, inverse, or control characters; decorative "comment" catalog names can be added; disks can be set up to boot on any file, deleted files can be restored, and much more.

DISK arRANGER is not only quite versatile, but also very easy to use. And, like all Penguin Software applications products, it is NOT copy-protected.

NOTE: The ProDOS version is designed to work with ProDOS or SOS disks only, and the DOS 3.3 version with DOS 3.3 disks only. Use with any other disk operating system can result in disaster, or at least some inconvenience. Do not use **DISK arRANGER** with any non-standard DOS!

Chapter 1 — Getting Started

DISK arRANGER for DOS 3.3 will run on any Apple series or compatible computer that uses DOS 3.3. However, the full power of **DISK arRANGER** can only be utilized on an Apple with 64K or more of RAM. Using the program on an Apple with 48K of RAM will preclude the use of the file copy and transfer routines.

DISK arRANGER for ProDOS will run on any Apple series or compatible computer with ProDOS and at least 64K of RAM.

DISK arRANGER, like all Penguin Software applications programs, is NOT copy-protected. Before you begin, you should make a backup copy of your master disk and then put the master away in a safe place. At no time should you use the actual master! You can make a backup of either version of **DISK arRANGER** by using any standard Apple copy program, such as the one provided on the DOS 3.3 System Master or the ProDOS System Utilities disk.

Once you have made a backup of **DISK arRANGER,** insert the new copy into drive 1 and turn the power on to boot the program. The drive will spin and load **DISK arRANGER.** The title page will appear and you will be told to press (**ESC**)ape to enter the program, or to press any other key to see a series of help screens with summaries of all the commands in **DISK arRANGER.** It may be helpful at this point to flip through the help screens, although all of the commands are more fully explained in this manual. Where there are differences between the features or operation of the two versions of **DISK arRANGER,** the differences will be noted.

Help

NOTE: You may see the help screens at any time during the operation of **DISK arRANGER** by pressing (**?**) or (/). Pressing (**CONTROL-RESET**) at any time will also display the help screens.

Once you have entered the actual **DISK arRANGER** program by pressing (**ESC**), you will be greeted with a screen that shows a data line at the top and a message, both of which will vary depending on which version of the program you are using.

DOS 3.3 version:

The message will read "No Catalog" and the data line will show the volume number of the disk you are working on and the number of used and free sectors on the disk. Upon startup, all three of those categories should show zeros.

ProDOS version:

The message will read "No Directory" and the data line will show the number of used and free blocks on the disk. Upon startup, these should both be zero.

Setting the Working Drive

Before you begin to use the **DISK arRANGER** program, you may want to reconfigure the program to work with your particular computer setup. At startup, the working drive is set to the last drive used by the operating system, and that may not be the way you want it. The next two paragraphs describe reconfiguration.

DOS 3.3 version:

(**CTRL-R**)eset Working Drive is the reconfiguration command. Press (**CTRL-R**) and the prompt "READ FROM: SLOT 6 DRIVE 1" will appear at the bottom of the screen. The actual values for the slot and drive will depend on what slot and drive you were using last. To accept these default values, press (**RETURN**) once for each value. To change these values, type in the values you wish to use. Please note that the only values that will be accepted are 1-7 for the slot number, and 1-2 for the drive number.

ProDOS version:

(**CTRL-R**)eset Working Drive is the reconfiguration command here, too. Press (**CTRL-R**) and the prompt "READ VOLUME BY N)AME OR S)LOT, DRIVE ?" will appear at the bottom of the screen. The device to work with may be set by entering the location in terms of slot and drive numbers, or by entering the volume name of any volume present in the system. If the slot and drive method is desired, press (**S**) and then follow the same procedure described for selecting slot and drive in the DOS 3.3 version. If you would rather specify the volume name that you wish to work with, respond to the first prompt by pressing (**N**) and you will see the new prompt "VOLUME NAME TO READ: /". Type in the appropriate volume name. The slash that ProDOS requires to begin a pathname is already there for you. Any valid ProDOS volume name may be entered, and will be searched for among the active devices in the system. If the device or volume selected cannot be found the response "CANNOT FIND THAT VOLUME" will be displayed and a new device will not be selected. If you decide not to select a new device, just press (**RETURN**) at any of the prompts and the command will be aborted.

Chapter 2 — Reading and Writing Disk Catalogs

The two most important commands in **DISK arRANGER** are the (**R**)ead Catalog and (**W**)rite Catalog commands. In the ProDOS version, the commands are called (**R**)ead Volume Directory and (**W**)rite Directory. NOTE: A good rule of thumb here is "Write to what you have Read from," which means, once you have loaded the catalog or directory of a disk into memory, be sure you **DO NOT** try to save it to another disk!

Reading a Catalog or Directory

DOS 3.3 version:

(**R**)ead Catalog will load the catalog from any DOS 3.3 disk into the computer's memory, where you can then modify it using any of the functions available in **DISK arRANGER.** Before employing this command, you must place the disk you wish to view in the working drive. The working drive is the drive in which you booted **DISK arRANGER,** unless you used the (**CTRL-R**)eset command to set a new working drive.

ProDOS version:

(**R**)ead Volume Directory will read a disk's Volume directory into memory so you can modify it using the functions available in ProDOS **DISK arRANGER.** This command will only read the Volume directory, after that the (**D**)own Directory Path and (**U**)p Directory Path commands may be used to enter and leave subdirectories. Upon reading a new Volume directory, any active Hold file will be cleared (Hold files are explained in the section 'Moving Files Between Directories'), and the block counts for the new Volume will be calculated and displayed in the status line on the top of the screen.

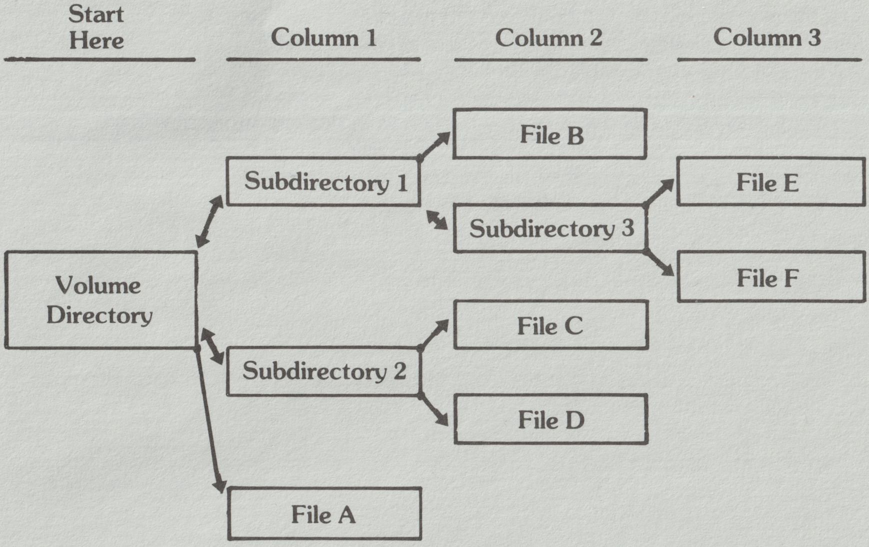
(**D**)own Directory Path will read the subdirectory indicated by the cursor into memory. The cursor must be highlighting a directory file entry. The current directory (in memory) will be replaced with the new directory (from the disk) without writing the current directory to disk, so any changes you want to keep should be written to the disk with the (**W**)rite Directory command. Please note: If the directory being brought in is in the Hold (Hold files are explained in the section 'Moving Files Between Directories'), the Hold will be automatically cleared before the new directory is read.

(**U**)p Directory Path will read the directory containing the current subdirectory into memory, or in other words, move up the directory pathname. This command will not work if the Volume directory is the directory in memory, since there are no directories higher than the Volume directory. The cursor may be at any point in the current directory. The current directory (in memory) will be replaced with the next higher directory (from the disk) without writing the current directory to disk, so any changes which are meant to be saved should be written to the disk with the (**W**)rite command.

For those of you unfamiliar with the ProDOS directory structure, here is a short explanation.

A ProDOS directory grows in a manner very similar to the way a tree grows. The Volume directory is the highest level of directory and may be thought of as the 'trunk' of the directory 'tree.' All information on the disk is connected in one way or another to the Volume directory. In many instances, your Volume directory will only contain files. A ProDOS Volume directory that only contains files is conceptually similar to a DOS 3.3 disk 'catalog.' However, under ProDOS the Volume directory may also contain other directories, which are referred to as 'subdirectories' since they are contained in the Volume directory (Subdirectories are not allowed under DOS 3.3). These subdirectories may hold files of data, and they may also hold yet more subdirectories. To continue the tree analogy, if the Volume directory is the 'trunk', then the subdirectories are like 'branches' and the actual files are the 'leaves'.

The following diagram should help further clarify the hierarchy of ProDOS directories and files. The one-way arrows point to files (Basic programs, text, hi-res pictures, etc.) and the two-way arrows point between directories (collections of files).



Now lets go through the diagram. In ProDOS **DISK arRANGER** the first thing to do is (**R**)ead the Volume Directory. That would get you the information shown in column 1. From there, you can move (**D**)own the directory path (down the branches) to see what's in Subdirectory 1 or 2 (shown in column 2). Since there are two 'branches' to take here, you can only take one of them at a time. From

Subdirectory 1, you can continue on (**D**)own to see what's in Subdirectory 3 (column 3). To get back out of Subdirectory 3 you must travel (**U**)p the Directory path (up the branch) to Subdirectory 1. To get from Subdirectory 1 to Subdirectory 2, you must travel (**U**)p to the Volume directory and then back (**D**)own to Subdirectory 2. All very logical. If you need more information, consult your ProDOS User's Manual.

Writing a Catalog or Directory

DOS 3.3 version:

(**W**)rite Catalog will save the catalog image currently in memory (and on the screen) to the disk in the working drive. This command is used after you have made all the modifications to the catalog that you wish to do. You will be asked to verify your choice before it is actually written to the disk. Note that none of the catalog alterations made using **DISK arRANGER** will be permanently saved to your disk until the (**W**)rite command and verify prompt have been used.

ProDOS version:

(**W**)rite Directory is used to write the directory currently in memory, as it is shown on the screen, to the disk in the working drive. You will be asked to verify that this is what you want to do. Press (**Y**) to write the directory, (**N**) or (**RETURN**) to change your mind. If the disk is write protected, or the disk in the drive is not the same one that the directory was read from, appropriate error messages will be displayed and the directory will not be written to the disk. A directory may be modified and rewritten as often as desired. While the directory is being written, the prompt "WRITING DIRECTORY. . ." will be displayed. NOTE: Do not use this command if the disk the directory was read from is not standard ProDOS 1.0/1.1 format! Doing so may destroy your disk.

Chapter 3 — Cursor Movement Commands & File Movement

In order to use the options in **DISK arRANGER,** first you will need to become familiar with the cursor and how to manipulate it. The cursor is the inverse line that is located at the top line of the catalog or directory once one has been (**R**)ead into memory.

The File Movement Flag

Both versions:

(**RETURN**) will toggle the File Movement Flag (the message at the top of the screen), which shows whether or not the file name shown by the cursor will move when you move the cursor. **DISK arRANGER** allows you to move any catalog or directory entry (file name) to any position in the listing by simply toggling on the File Movement Flag and then using the left and right arrow keys to move the file name to its desired position in the listing. Additionally, when the File Movement flag is on, the (**B**) and (**E**) keys can be used to instantly move file entries to the beginning or the end of the catalog. On the Apple //e and //c the up and down arrow keys may also be used to move file entries. Pressing **RETURN** will turn the file movement on or off.

Cursor Movement

Both Versions:

Left Arrow or **Up Arrow** moves the cursor up one line. If the cursor is moved toward the top of the listing and any of the first files are not shown on the screen, the cursor will stop near the top of the screen and the listing will scroll down. Once the cursor reaches the top of the catalog or directory listing, it will stop. There is no screen wrap-around.

Right Arrow or **Down Arrow** moves the cursor down one line. If you move the cursor toward the bottom of the screen and the end of the catalog or directory is not visible, the cursor will stop near the bottom of the screen and the listing will scroll up. Once the cursor reaches the bottom of the listing, it will stop. There is no screen wrap-around.

(**B**)eginning will move the cursor to the top of the catalog or directory listing. If the File Movement Flag is on, the file name highlighted by the cursor will be moved to the top of the listing along with the cursor.

(**E**)nd will move the cursor to the bottom of the catalog or directory listing. If the File Movement Flag is on, the file name highlighted by the cursor will be moved to the bottom of the listing along with the cursor.

Joystick Control

Both versions:

(**J**)oystick will allow you to move the cursor using a joystick or paddle controller. Upon selecting this option, a message will appear at the bottom of the screen to let you know the joystick option is active. Once this option has been selected, **Button 0** will toggle the File Movement Flag. The cursor can now be moved using a joystick. Pushing the joystick a little either up or down will move the cursor normally in the corresponding direction. Pushing the joystick all the way up or down will move the cursor rapidly in the corresponding direction. This option is useful when manipulating extensive catalogs. Pressing any key other than (**J**) will exit joystick mode.

Moving Files Between Directories

ProDOS Version Only:

(**H**)old the cursor file is the command used to move file entries between directories on the same Volume. The file selected must be active, and can be of any type, including a directory. If the cursor file is acceptable, the Hold will be activated. An active Hold is indicated by an inverse 'H' on the right side of the lower dashed line. If the Hold is already active when you invoke this command, a 'beep' will sound and the command will be ignored. The name of the Hold file may be viewed by using the (**CONTROL-I**)nspect Hold command, the Hold file name may be inserted into the current directory with the (**I**)nsert Hold command, and the contents of the Hold area may be cleared by using the (**CONTROL-C**)lear Hold command. All of these commands are explained in the following paragraphs. Please note that the Hold is automatically cleared when executing certain commands, such as (**R**)ead Volume Directory to get a new Volume directory (you can't move file names between Volumes, you must copy the file itself) or (**D**)own Directory Path where the directory to be read is the one in the Hold (you also cannot move a directory into itself!).

(**CTRL-I**)nspect Hold will display the file name of the current Hold file in the dashed line shown at the bottom of the screen. An active Hold is indicated by an inverse 'H' at the right side of the dashed line. If there is no Hold file, you will hear a 'beep' and the command is ignored.

(**I**)nsert Hold File will insert the Hold file entry at the current cursor position. For this command to operate, the Hold must be active, and the file entry in the Hold must be from the same disk but from a different directory than the one currently in memory. The Hold file entry will be inserted in the current directory at the cursor position, and the rest of the file entries in the directory will be moved down. The original file entry in the original directory will be marked as a deleted file, and the current directory will be written to the disk, to insure that the file is always active in some directory on the disk.

(**CTRL-C**)lear Hold will clear the current contents of the Hold. The inverse 'H' on the right of the bottom dashed line will disappear and you may select another file for the Hold. If the Hold is not active, nothing will happen. This command is invoked automatically under certain conditions, such as (**R**)ead Volume Directory (which means a new Volume is to be read) and (**D**)own Directory Path (if the Hold file is the directory to be read).

NOTE: None of these commands make any changes to the file they work with. You can move files between directories as often as desired without affecting the actual file data in any way. The only change you may make is which directory the file entry is found in.

Chapter 4 — File Maintenance & Management Commands

The following commands constitute the heart of **DISK arRANGER.** With them you will be able to organize your catalogs and directories and customize your disks. In the DOS 3.3 version, you can also examine the track and sector usage of a particular file or all the files on a disk.

Sorting

Both Versions:

(**S**)ort Files allows you to arrange your catalog/directory entries either alphabetically or by file type. Upon pressing (**S**)ort, you will be asked 'Sort A)lphabetically or by T)ype?.' **DISK arRANGER** will sort the files from the cursor position to the end of the listing. Selecting (**A**) will, of course, sort the files alphabetically without regard for file type. Selecting (**T**) will keep the files in the same logical order while grouping them by file type. In the DOS 3.3 version, Applesoft files will be first, followed by Integer, Binary, Text, and Relocatable. In the ProDOS version, SYS files will be first, followed in order by BAS, DIR, BIN, and TXT files. If you sort alphabetically and then by file type, you will have your files in alphabetical order, grouped by file type. If you decide you don't want to sort, just press (**RETURN**) from the prompt.

File Attributes

DOS 3.3 Version Only:

(**A**)ttributes will display the attributes of the cursor file. For a binary file, the loading address and length will be shown. These will be the same values used when the file was 'Bsaved'. For an Applesoft file, only the length will be shown. The values given are in hexadecimal. Attempting to view the attributes of a file that is not Basic or Binary will result in the message 'MUST BE BASIC OR BINARY FILE' and the command will be ignored.

Locking and Unlocking

DOS 3.3 Version:

(**L**)ock Toggle allows you to either Lock or Unlock files on the disk. Whether or not a file is locked is indicated by an asterisk (*) to the left of the file name. If a file is locked and you wish to unlock it, place the cursor on the file name and press (**L**)ock. Conversely, if a file is not locked and you wish to lock it, place the cursor on the file name and press (**L**)ock.

Please note that files that have been deleted from the catalog cannot be locked, although they may appear on-screen with the letter 'D' preceding them. The (**D**)elete command (to be discussed later in this chapter) will mark a file as having been deleted, but will still permit the file to be seen.

(**CTRL-L**)ock Toggle is a global version of the (**L**)ock command. This command allows you to either lock or unlock all of the files in a disk catalog. The cursor file is used to determine which operation will take place. If the cursor file is locked and the (**CTRL-L**)ock command is used, all files will be locked. If the cursor file is unlocked when the (**CTRL-L**)ock command is used, then all the files will be unlocked. This command is particularly useful when you wish to unlock files for manipulation with another program, or when you wish to lock all the files on a diskette once you have finished working on them.

ProDOS Version:

(**L**)ock allows you to view and/or change the file access attributes for any file on a disk. When this is invoked, the bottom dashed line on the screen will display the prompt: "ATTRIBUTES ENABLED: - TOGGLE (D,N,R,W):". The very last line will display the current attributes for the cursor file.

The attributes and their meanings are:
DESTROY - Allows the file to be deleted
RENAME - Allows the file to be renamed
READ - Allows ProDOS to read the file
WRITE - Allows ProDOS to write the file

Press (**D**) to toggle the destroy attribute, (**N**) for the rename attribute, (**R**) for the read attribute, and (**W**) for the write attribute. Press (**RETURN**) to keep the current status and exit the Lock mode. Please note that in order for a file to be considered 'unlocked', the DESTROY, RENAME, and WRITE attributes must all be enabled. As usual, changes to the actual directory on disk will not be made until the directory is written to the disk. NOTE: You cannot view or change the attributes of a deleted file; if you try to, a beep will sound and the command will be ignored.

(**CTRL-L**)ock is a global version of the (**L**)ock command, and is used to set all the files in the current directory to the status of the cursor file. The cursor file is used as a reference for the attributes that should be enabled, and those attributes will be displayed on the bottom line of the screen after the command has been executed. If the cursor file is a deleted file, then a warning beep will sound and the command will be ignored.

File Deletion

DOS 3.3 Version:

(**DELETE**) File is used to remove a file name from the catalog, effectively deleting the file from the disk. (On an Apple II/II+ the (**X**) key performs this function). The command is used by placing the cursor on the file you wish to remove and pressing (**DELETE**) or (**X**). The file will be marked with the letter "D" and the Track/Sector list in the catalog is modified to show the space used by the newly deleted file as available for other use. The data line at the top of the screen will be updated to show fewer used sectors and more free sectors.

ProDOS Version:

(**DELETE**) File is used to delete the file shown by the cursor from the current directory in memory (On an Apple II/II+ the (**X**) key performs this function). Press (**DELETE**) or (**X**) and you will see the prompt: "DO YOU WANT TO DELETE THIS FILE?". The default response is No, and will be shown as an inverse "N" after the prompt. Press (**Y**) to delete the file, or (**RETURN**) to change your mind. The file must have the Destroy attribute on, and the attributes for the file in memory must be the same as those for the file on the disk. If you must change a file's attributes in order to delete it, you must also (**W**)rite the directory to disk before you will be able to delete the file. NOTE: Once a file is deleted, it cannot be undeleted, so only delete files that you really want to delete.

Undeleting Files

DOS 3.3 Version Only:

(**U**)ndelete File is used to restore a previously deleted file to working status. The command is used by placing the cursor on a file marked with the letter "D", and then pressing (**U**)ndelete. The Catalog Track/Sector list will be checked to see if any of the space used by the previously deleted file is now being used by another file, and if the Track/Sector pairs that identify the file are valid. If both these conditions are met, then the file will be restored. If one or both of these conditions are not met, then you will not be able to restore the deleted file. If you successfully (**U**)ndelete a file, the data line at the top of the screen will be updated to show more used sectors and fewer free sectors on the disk.

Removing Deleted Files

Both Versions:

(**K**)runch Deleted Files. This command allows you to either move all deleted files to the end of the catalog or directory listing, or to remove them from the listing altogether. When this command is used, you will be prompted to: M)ove or R)emove Deleted Files? Pressing (M)ove will result in all deleted files being moved to the end of the listing. Pressing (R)emove will remove all the deleted files from the listing permanently, which means that they will not be shown in the listing as marked with a "D". This also means that the files can never be (**U**)ndeleted. If you decide you don't want to (**K**)runch the deleted files, just press (**RETURN**) at the prompt.

Naming Files

DOS 3.3 Version:

(**N**)ame File allows you to rename any file in the catalog. There are two types of file names that can be created using this command. When you use this command, you will be asked: N)ormal or V)erbatim Entry?

Selecting a (**N**)ormal file name allows you to type in a new name using the standard Apple line editing commands.

Selecting a (**V**)erbatim file name allows you to type in virtually any character, including imbedded control characters, carriage returns, and backspaces. Furthermore, you can use normal, inverse, or flashing characters in your file name. When you are prompted to type in the file name in the (**V**)erbatim mode, you **must** type in 30 characters. A counter will appear on the lower right side of your screen showing you how many characters you have typed. The input mode is also shown at the bottom right side of the screen, with "I" for Inverse, "F" for flashing, and "N" for normal. Pressing the (**ESC**)ape key will cycle through and allow you to choose one of the three input modes. The (**V**)erbatim mode is particularly useful for creating decorative or customized catalogs.

ProDOS Version:

(**N**)ame File is used to rename any file entry in the directory. When this command is used, the prompt: "NEW FILE NAME:" will be displayed on the bottom line of the screen, with a flashing cursor prompting for the new file name. Any filename that follows the ProDOS rules may be entered. Specifically, this means the filename can be no more than 15 characters long, must start with an alphabetic character, and may only contain the characters 'A' to 'Z', the period '.', and the numbers '0' to '9'. Any attempt to violate these rules will result in a 'beep' from the speaker and the character will be ignored. The right and left arrows may be used to edit the filename. Pressing (**ESC**) at any time will cancel the new filename. Press (**RETURN**) when done to enter the filename into the directory at the cursor position. NOTE: If you try to rename a deleted file, you will hear a 'beep' and the command will be ignored.

Creating a Comment File

DOS 3.3 Version Only:

(**C**)omment File. This command allows you to create "comment" file names in your catalog. When you use this command, you can add the new file name **at the cursor position,** with all other catalog entries being moved down.

Upon selecting (**C**)omment File, a blank line will appear at the cursor position and you will be prompted to choose the file type. At the bottom of the screen there will be letters "TIABR" with the "∧" sign below the "T". Pressing any key other than (**ESC**)ape or (**RETURN**) will move the "∧" indicator to the next letter. The letters stand for the following files types: T = Text; I = Integer BASIC; A = Applesoft BASIC; B = Binary; R = Relocatable. When the "∧" is below the file type you wish to use, press (**RETURN**) to select it. If you press (**ESC**)ape here, the operation will be terminated and the catalog restored to its original condition. You will then be asked to type in a file name, using the standard Apple line editing and ESC commands. Please note that you must type in at least one character to create a (**C**)omment File.

Changing the Hello File

DOS 3.3 Version Only

(**H**)ello File. This command allows you to determine or change the "Hello" file, i.e., the file that will be used when the disk is booted. When you use this command, you will be asked: D)isplay or S)et the Hello File? If you wish to determine which file is the Hello file, press (**D**) and the current Hello file name will be displayed at the bottom of the screen. If you wish to change the Hello File, press (**S**), and the file at the cursor position will be used by DOS as the Hello File. This option will work with any type of file.

Previewing the Catalog

DOS 3.3 Version Only:

(**P**)review the Catalog allows you to view what the new catalog will look like. When you use this command, you will be shown how your new catalog will appear when viewed under DOS. As with the normal DOS Catalog command, the catalog will be displayed a screenful at a time, pausing for a keystroke to continue after each screen. Once the entire catalog has been displayed, an "=" prompt will be shown. Press any key to return to the **DISK arRANGER** screen. This command is very useful before saving the new catalog to disk with the (**W**)rite command.

Editing the Time

ProDOS Version Only:

(**T**)ime Edit allows you to edit the time and date of the file selected by the cursor. This may be the created or modified time and date. The (**CTRL-T**)ime Select command is used to select which time to edit, and is described in the next paragraph. The cursor file must not be a deleted file, but may be of any file type. Press (**T**) and you will see the prompt: "NEW DATE AND TIME:" displayed on the bottom line of the screen along with the current date and time values for the file. You may now edit the date and time as desired. Press (**RETURN**) when you are done and the values entered will be checked for validity. If any value entered is unacceptable, a beep will sound and the new entry will be ignored. Press (**ESC**) at any time during entry of values to abort the command. This command is especially useful to those who do not have a clock that is supported by ProDOS and suffer from the dreaded < NO DATE >.

(**CTRL-T**)ime Select is used to toggle the time display between the created and the modified time. The current selection is displayed in the upper dashed line of the screen. Press (**CTRL-T**) to switch back and forth.

Chapter 5 — File Copy Commands

NOTE to DOS 3.3 version users: The following commands can only be used on an Apple II series or compatible computer with at least 64K of RAM. If you own an Apple with 48K of RAM, you will need to add a language card in order to use the file copying capabilities of **DISK arRANGER**.

Setting Drives

(**CTRL-F**)ile Copy to Which Drive? This command allows you to choose which drive a file will be copied to (the Target drive). **DISK arRANGER** assumes that you will be copying to the same drive which you originally booted the program on, unless told otherwise by use of this command. When you select this command, you will be asked: Copy to Slot X Drive Y, where X and Y correspond to the slot and drive number which the program was originally booted on. Pressing (**RETURN**) will accept the displayed values, or you may type in the number of the slot and drive you wish the file to be copied to. The only values that are valid for this command are 1-7 for the slot number and 1-2 for the drive number.

ProDOS Version:

(**Ctrl-F**)ile Copy Prefix is used to set the prefix and pathname that will be used by the (**F**)ile Copy command. In order to copy a file, at least the target Volume prefix must be set, and it must be different from the Volume currently being worked on. When this command is selected, the current prefix and pathname will be shown on the bottom line of the screen. Press (**RETURN**) to accept the current values, otherwise enter the appropriate new values. Both the prefix and the pathname may be up to 64 characters long, and standard Apple editing using the arrow keys may be used to edit the entry. All entries must follow the ProDOS rules for pathnames, or they will not be accepted.

Copying a File

DOS 3.3 Version:

(**F**)ile Copy. This command allows you to copy the cursor file to another disk. Upon selecting this command, you will be asked to verify your choice. You then will be prompted to put the Target disk into the Target drive (the same drive in a one-drive system, or the drive designated Target drive by use of the (**CTRL-F**)ile Copy to Which Drive? command), and press (**RETURN**). The file will be copied 64 sectors at a time until the copy operation has been completed. If you are using a one-drive system, you will be prompted to switch the Original and Target disks at the appropriate times.

If there is not enough space on the Target disk for the new file, **DISK arRANGER** will copy as much as will fit, and then return to the **DISK arRANGER** screen WITHOUT making a new catalog entry on the Target disk. Otherwise, the catalog on the Target disk will be updated to contain the new file name.

If there is already a file on the Target disk with the same name as the file you wish to copy, you will be asked: File Exists. Replace File (Y/N)? If you do NOT wish to replace it, press (**RETURN**). If you DO wish to replace it, press (**Y**). Please note that if you are replacing a file on the Target disk and there is not enough room on it to receive the new file, **DISK arRANGER** will delete the old file and NOT update the catalog with the new file name. To avoid any problems here, use the (**O**)ther Disk's Catalog command, which is discussed later.

ProDOS Version:

(**F**)ile Copy will copy the cursor file to the target disk. The prefix and pathname for the target disk must have been set with the (**Ctrl-F**)ile Prefix command prior to copying any files. The file to be copied must be a standard file, it cannot be a directory file. When you press (**F**)ile Copy you will be asked to verify your choice. Press (**Y**) to copy the file, (**N**) or (**RETURN**) to forget it. Once verified, the copying will begin.

The new file will be given the name indicated by the cursor, even if the actual file on the source disk has a different name. This means that you can rename a file just for the purpose of copying it to another disk without altering the original file name in the original directory (Remember, name changes are not permanent unless the current directory is (**W**)ritten to disk). If a one drive system is being used, or if a Volume with the target prefix cannot be found within the system, a single drive copy will be done, with the appropriate disks prompted for as needed. Pressing (**ESC**) in response to any one of these prompts will halt the file copy procedure, and **DISK arRANGER** will, if possible, delete the new file from the target disk.

If a file with the same name as the cursor file already exists on the target disk when the file copy begins, you will be prompted with: 'FILE EXISTS.REPLACE FILE (Y/N)?'. Press (**Y**) to replace the file, (**N**) or (**RETURN**) to forget it. If a file must be replaced, it must be unlocked. If any errors occur during the copy process, the copy will be aborted and the program will try to delete the new file from the target disk.

Cataloging the Target Disk

DOS 3.3 Version Only:

(**O**)ther Disk's Catalog. This command allows you to view the catalog of the Target disk before you invoke a (**F**)ile Copy command. The command will display the Target disk's catalog and show how much free space exists on that disk. When you use this command, you will be shown the Target disk catalog in normal DOS format, with the catalog pausing at each screenful for another keystroke. Once the entire catalog has been viewed, you will see an "=" prompt. Press any key and you will be shown how many sectors have been used and how many sectors are free on the Target disk, followed again by the "=" prompt. Pressing any key will return you to the **DISK arRANGER** screen.

Chapter 6 — Disk Map & Miscellaneous Commands

Disk Map

DOS 3.3 Version Only:

(**M**)ap. This command allows you to determine the disk space allocation and location of a particular file; or to view a map of total disk space usage showing the locations of free and allocated sectors.

Upon selecting the (**M**)ap option you will be asked D)isk or F)ile Map? Press (**D**) or (**F**) to see the corresponding map.

Both maps are shown in a format with sectors displayed horizontally and tracks shown vertically. The sector and track numbers are in hexadecimal.

The File Map option will show the current cursor file as the third line of the map on screen. Sectors used by the cursor file are indicated by "*", while the Track/Sector list, a list used by DOS to indicate all other sectors used by the file, is shown with "T".

Printing the Screen

Both Versions:

(**CTRL-P**)rint Screen — This command allows you to print any screen image displayed by **DISK arRANGER** on your printer, provided you have your printer interface card in Slot 1 and it is either the Apple Parallel Print card or another printer interface card capable of turning off the display of characters sent to it with the sequence "CONTROL-I 50N".

Quitting

DOS 3.3 Version:

(**CTRL-Q**)uit — This command may be used at any time to exit **DISK arRANGER.** If you have left the program and wish to re-enter without losing the data currently in RAM, the following entry points may be used:

From Integer or Applesoft BASIC: CALL 2054
From Applesoft BASIC: &
From the monitor: CTRL-Y
From machine/assembly language: JMP $0806

ProDOS Version:

(**CTRL-Q**)uit is command used to exit the ProDOS **DISK arRANGER.** Be sure to save any alterations to the directory before quitting. Under ProDOS, to exit one system program you must enter another one. Therefore, when you press (**CTRL-Q**) you will see the prompt: 'DO YOU WANT TO START ANOTHER SYSTEM?'. Press (**N**) or (**RETURN**) to get back to ProDOS **DISK arRANGER.** Press (**Y**) and you will be shown the current values for prefix and filename of a system program. Press (**RETURN**) to accept those values, or enter the prefix and filename of the system program you wish to start. If you don't want to start another system or go back to **DISK arRANGER,** you must turn off the computer or reboot.

APPENDIX A - ERROR MESSAGES

The following is a list of error messages that may be displayed during operation of the **DISK arRANGER** program.

Access Error

ProDOS version: This error occurs if the file's access attributes forbid the action being attempted. An example would be trying to delete a file that is not destroy enabled. Recheck the file's attributes.

Allocation Error In VTOC

DOS 3.3 version: This error may occur during reading of a disk catalog, and means that the Volume Table of Contents on the disk shows a sector allocated to a file, but no file actually using the sector. The VTOC in memory is corrected, and if you write the catalog to the disk, the VTOC on the disk will also be corrected.

Bad Buffer Address

ProDOS version: This seldom-seen error may occur during a file copy if a previous file copy command resulted in an error condition where the target file could not be closed.

Bit Map Disk Address Is Impossible

ProDOS version: The volume bit map of the disk indicates that the volume contains blocks beyond the block count for that volume. Probably means a bad disk being read.

Cannot Extend Directory To Add a File

ProDOS version: When inserting a hold file, the current directory often must be extended to accommodate the new file. This error may occur in the volume directory if it is already full, as well as in any subdirectory if it or the volume directory is full. If you have deleted files in the current directory, you may use the Krunch and Remove command to free up some space.

Cannot Find The Original File Entry

ProDOS version: This error will occur when inserting a file from the hold into the current directory and the original file entry in the original directory cannot be found. This could occur if the original name or date were changed and the file was held, but the original directory was not updated with the (**W**)rite command.

Cannot Find That Volume

ProDOS only: This response may be returned after an attempt has been made to set the working device with the 'Control-R' command and the intended volume or slot/drive could not be found among the active devices attached to ProDOS.

Catalog Is Too Long

DOS 3.3 version: This error may occur while a disk catalog is being read. If a non-standard catalog format was used to increase the number of files a catalog may contain, it may be too long to be worked with. **DISK arRANGER** can usually handle a catalog up to 31 sectors in length, but if you receive this message, the catalog is too long.

Directory Count Error

ProDOS version: The number of entries indicated in the directory header does not match the number of entries actually found. There may be a problem with the disk.

Directory Is Different From Disk

ProDOS version: Many commands require that the directory in memory be identical to the directory on disk in all ways. If you get this message, (**W**)rite the directory to disk and reenter the command that generated the error.

Directory Is Too Big

ProDOS only: This message is displayed when attempting to read a directory or subdirectory with over 450 file entries. You must delete or move enough files to make the total no more than 450 in order for **DISK arRANGER** to operate on the directory.

Disk Error - Disk I/O Error - Drive Error

Both versions: These messages all represent the same error, which may occur during any disk access. It usually means an unreadable disk, the drive door is open, or the drive needs adjustment. The command in progress will be aborted.

Disk Is Write Protected

Both versions: This message occurs when you try to write to a disk which does not have a notch, or whose notch is covered by a write-protect tab. The attempted operation is aborted. You must remove the tab or put a notch in the disk before trying again.

Duplicate Volumes On Line

ProDOS version: This is a warning that two or more volumes on line have volume directories with the same name. This is a no-no, for sure. The extra volume(s) should be removed from the system.

Files Cannot Be Copied To The Same Disk

ProDOS version: The **(F)**ile Copy command will only copy files from one volume to another. If the file prefix is the same as the volume currently being worked on, the command will be aborted with this message displayed.

File Has Been Overwritten

DOS 3.3 version: This error may occur during operation of the **(U)**ndelete command, and indicates that the file in question has been overwritten by other data since it was deleted and cannot be undeleted.

File Is Open

ProDOS version: An attempt was made to open, rename, or destroy an open file.

File Length Error

DOS 3.3 version: This error can occur while reading a disk catalog if the file length shown for one of the files is incorrect. The length shown by **DISK arRANGER** will be the corrected one, and if you **(W)**rite the catalog, the disk will show the correct length. This occurs most often with text files that are used frequently. The offending file is not identified.

File Not Found

ProDOS version: The last filename of the pathname does not exist. The pathname is otherwise valid.

Incompatible File Format

ProDOS version: The storage type of the file in question is not compatible with the version of ProDOS currently being executed. The operation is aborted.

Incorrect Command Type '?' For Help

Both versions: This message is displayed when a key other than those listed on the help screens is typed.

Install and Center Joystick

Both versions: This error occurs when the 'J' command is typed to enter joystick mode, but no joystick is attached, or analog input #1 from the joystick port returns a value of 255.

Invalid Pathname Syntax

ProDOS version: This is an obscure error which will probably never occur, because all pathname entries are validated as they are entered. If it does, you will have to reenter the pathname.

Invalid Reference Number

ProDOS version: This error may occur during a file copy if the internal number **DISK arRANGER** uses to reference the target file is invalid. Start the file copy procedure over.

Memory Allocation Error. System Halted

ProDOS only: This error only occurs on startup when the system memory allocation map indicates that the areas of memory required for operation are already in use by another program. The system should be rebooted.

Must Be a Basic or Binary File

DOS 3.3 only: This error occurs when attempting to view the attributes of a file whose type is not Basic or Binary.

No Device Connected

ProDOS version: This message is displayed if ProDOS attempts to access a device that is not physically connected to the system, such as trying to load from drive two in a single drive system. Check your drive configuration.

No File Buffer Space Available

ProDOS version: In order to copy files from one disk to another, a certain amount of file buffer space is required. If the buffer space is not available and you try to copy a file, this error will occur. It is usually due to having a very large directory in memory. Moving the file entry to another directory with the (**H**)old command and then copying from that directory should fix the problem.

Not a ProDOS Disk

ProDOS version: The disk in question is not a ProDOS or SOS directory format.

Overrun Error

ProDOS version: This error may occur during the file copy procedure if the target disk is filled. The procedure will be aborted and the new file will be deleted if possible.

Read Error

DOS 3.3 version: This error may occur during any disk access, and usually means there is a sector on the disk that cannot be read. Any operation in progress is halted. If it happens more than once, the disk is probably bad.

Sector Value Error

DOS 3.3 version: This error is due to a sector value being found that is greater than 15, the maximum supported under DOS 3.3. This could be due to a bad disk, or a temporary hardware problem. Any operation in progress is aborted. You should try the command again, and if it still fails, try rebooting.

Target Disk Catalog Is Full

DOS 3.3 version: This error occurs during the file copy operation if the target disk's catalog does not have room for a new file name. The operation is aborted.

Target Disk Is Full

DOS 3.3 version: This error will occur during the file copy operation if the target disk runs out of room. The copy is aborted and the target catalog is not updated.

Target Disk Was Switched

ProDOS version: If the target disk is removed or changed during a file copy procedure, the file copy will halt and display this message. You must start over.

Target Pathname Is Not Valid

ProDOS version: This error occurs if a file copy is attempted and the target prefix has not been set with the (**CTRL-F**)ile Prefix command. Set the prefix and pathname first and all should be well.

Target Path Not Found

ProDOS version: A filename in the target pathname does not exist. Check the disk being copied to, and reenter the pathname if necessary.

Target Volume Directory Is Full

ProDOS version: If a file copy is attempted to a volume directory that already contains the maximum of 51 file entries, this message is displayed and the copy procedure is halted.

Track Value Error

DOS 3.3 version: This error is the result of a track value being found that is greater than 34, the maximum number that is supported under DOS 3.3. This could be due to a bad disk or a temporary hardware problem. Any operation in progress is aborted. The best thing to do is try again or reboot.

Unknown Error

ProDOS version: A ProDOS error of undocumented origin has occurred. The system should be rebooted.

Unsupported Storage Type

ProDOS version: The file in question is of an organization unknown to the ProDOS file manager. This error may also occur if the target prefix is set to a nondirectory type file.

Volume Directory Not Found

ProDOS version: The volume directory of the pathname last used could not be found. If encountered during a file copy, it is used to indicate that a single drive copy should be started.

Volume Mismatch

DOS 3.3 version: This error may occur during any disk access, and usually means that the wrong disk is in the drive. Before any disk action occurs, the program makes sure the disk that the current catalog belongs to is still present. If a different volume number is found, the command is aborted and this message is displayed.

Wrong Disk In The Drive

Either version: This error may occur during any disk access. Before any disk operation begins, the disk is checked to make sure it is the same one that the current directory or catalog was read from. If it is not, this message will be displayed and the command will be aborted.

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